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NOTE ON A WATER-BEETLE FOUND IN SEA-WATER

By CHARLES CHILTON, M.A., D.Sc., F.L.S.

WELLINGTON.

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ART. XII.—*Note on a Water-beetle found in Sea-water.*

By CHARLES CHILTON, M.A., D.Sc., F.L.S., Professor of Biology at Canterbury College.

[Read before the Philosophical Institute of Canterbury, 7th June, 1905.]

IN January, 1905, while searching in the rock-pools at Island Bay, Wellington, for marine animals, I found a water-beetle swimming freely among the seaweed in one of the pools. Only the one specimen was seen, but it seemed quite at home, and was behaving just as it might have done in fresh water. As its occurrence in salt water appeared rather unusual, the specimen was forwarded to Dr. David Sharp, of Cambridge, England.

He informs me that it is *Rhantus pulverosus*, Stephens, a species already known from New Zealand and elsewhere, and that, as it is sometimes found in brackish ditches and streams near the sea, there is a probability that it had been passively carried out to sea by a flood; at the same time he points out that the distribution of this and of some other species can only be explained by supposing that they are capable of living in the ocean for a time, and, if a suitable object presents itself to give them a starting-point, of taking fresh flights from time to time.

There is a small stream at Island Bay which opens into the sea not very far from the place where the beetle was captured, and it is quite likely that it may have been carried into the sea from the stream during a flood; but even if it is so the beetle must be capable of living for some time in actual sea-water, for the pool in which it was taken was freely exposed to the inflow of the waves at all times except at dead low tide, and the stream was at such a distance and the volume of water in it so very inconsiderable that it could make no appreciable effect on the salinity of the water in the rock-pools.

Darwin in his "Voyage of the 'Beagle'" records the finding of several live water-beetles swimming in the ocean seventeen miles from land, off Cape Corrientes, and considers that they had been floated into the sea from a small stream which drains a lake near the cape. He also records the finding of a species of *Hydrophilus* in a lagoon near Rio Janeiro in which the water was only a little less salt than in the sea.

I have thought it worth while to record the above facts, for exceptional occurrences of this kind are often of special value in the explanation of difficult questions that may arise in connection with geographical distribution.

